REMARKS

The Examiner rejected claims 1-3, 6-9, 14-17, 21 and 38-42 under 35 U.S.C. 102(b) as anticipated by Rowe, U.S. Patent No. 5,237,952. Rowe discloses a variable attitude submersible hydrofoil (VASH) that has forward fins that rotate up and down as well as forward and backward. When the fins are rotated into a lowered vertically aligned position they function as hydrofoil struts. When the fins are rotated into the upper horizontally aligned position they function as diving planes. In the upper position, the fins can rotated forward which causes the craft to submerge underwater or rotated back which causes the craft to surface. (Col. 3, line 56 - Col. 4, line 8, Col. 6, lines 34-39, Figs 5 and 6.)

In contrast to articulating fins, the claimed submersible has large wings that are rigidly fixed to the hull and function like the fixed wings of an airplane. The large fixed wings have are very strong and allow the submarine to dive to very deep. The large wings also allow the submarine to travel very slowly without stalling. (Application. pages 28 and 34.) Rather than changing the pitch of the entire surface, the "lift" of the fixed wings is changed by moving ailerons attached to the trailing edge of the wings. (P. 19, Figs. 8A and 8B.) All claims have been amended to add the limitation that the wings are fixed and have movable ailerons.

There is a substantial difference between rigid wings with ailerons and the rotatable fins disclosed by Rowe. The inventive winged submersible uses large fixed wings to counteract the vertical buoyant forces. Only the ailerons allow the pilot to alter the roll of the submersible. In contrast, the articulating fins disclosed by Rowe requires a very complex rotational mechanism to control the fin movement and support the buoyant forces.

An analogous comparison would be between an airplane having rigid wings with ailerons and a theoretical airplane that had wings that can articulate independently at the junction with the body. Because the loads applied to the wings are very high, the rigid wing has many advantages. A rigid wing is less prone to failure because therefore a fixed wing and the mechanism used to rotate the entire wing would be very complex. All conventional airplanes use fixed wings with movable ailerons rather than independently movable wings.

Because Rowe and the cited prior art do not disclose a submersible having fixed wings and movable ailerons, the applicant respectfully submits that Claims 1-89 are patentable over the cited prior art and request that they be allowed. The Examiner is encouraged to call the undersigned collect at (415) 705-6377 if there are any outstanding issues or questions which can be resolved to allow this application to be passed to issue.

Respectfully submitted,
Dergosits & Noah, LLP

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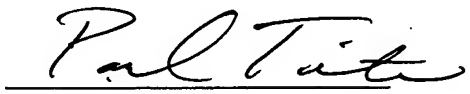
By: 

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